

UNIVERSITY OF CALIFORNIA.

AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 40.

Clairette Blanche.

The Clairette Blanche belongs altogether to Southern France, within the region of olive culture; from below Valence on the Rhone, to the Mediterranean coast and along the same from Nice to the Spanish frontier. Within this region it has been extensively cultivated from ancient times to the present. It is used not only to impart delicacy and spirit to red wines, but also by itself produces the wine commercially known as Picardan, as well as others locally designated as "Clairette." It is used for both dry and sweet wines. For the latter it is allowed to become overripe and shriveled on the vines. It is, besides, highly esteemed as a table grape. It bears transportation well, being firm-fleshed, crisp, sweet and agreeably flavored.

The hardiness and vigorous growth of the Clairette are proverbial in Southern France. No variety is longer lived, giving good crops even when old, and has resisted longer than any southern variety the attacks of the phylloxera. It adapts itself readily to all soils, provided they are deep; on shallow, stony ground it is soon exhausted. On soils of the latter character it should receive very short pruning; on rich and deep soils, on the contrary, such treatment would tend to the development of suckers instead of fruit.

The berry is rather small, of an olive shape, and from greenish to yellowish white, according to the degree of maturity. It ripens late (third period).

From Folsom it is reported as being of vigorous growth and a heavy bearer. It was gathered September 23d, fully ripe. The grapes were received in excellent condition at the University, and were crushed September 25th, showing at the time 21.1 per cent of sugar. The berries were somewhat smaller than in the figure given in the "Vignobles," but otherwise agreed fully with the description.

The yield of must from 175.6 pounds crushed was 9.3 gallons, or at the rate of 106.05 gallons per ton, a remarkably low figure; pomace 20.5 per cent. Fermentation started on the evening of Sept. 26th, at a temperature of 65.3 F., and reached its maximum during the next evening at 73.4 degrees (that of the cellar being 69 degrees), and retained that temperature for about 48 hours, when it slowly fell to the cellar temperature on Oct. 3d. The young wine was racked from the lees on Oct. 17th. It had cleared remarkably well, and deposited but very little sediment afterwards, so that the second racking was deferred until February 12th. The high qualities of the wine very soon became apparent, the development of its lively and full bouquet being very rapid and striking. No detailed notes of the earliest tasting are on record.

Dec. 7, Report of Vit. Convention Committee.
—University sample No. 29, Clairette Blanche, from Folsom grapes, was among the wines most remarked. Its high qualities invite the propagation of the variety on a more than moderate scale.

Feb. 9, 1885. (Pohndorff.)—Clairette Blanche in 5-gallon keg has developed rapidly, though suffering somewhat from the effects of the thin keg staves.

A sample in full bottle is in good preservation and bright, though not as far advanced in development as the keg sample.

A remnant, kept in a loosely stoppered bottle since November, although suffering somewhat from access of air, has developed finely the fruity expression of the grape.

March 17, 1885. (F. W. H.)—Sample from keg is clear, almost bright; color, white. The bouquet is decided and very agreeable, the acidity moderate but adequate, the body medium heavy. For its age the full vinosity of the sample is remarkable.

Roussanne.

The Roussanne is not a grape of wide distribution. It is most extensively cultivated in Savoy and more or less in the adjacent departments of Isere and Drome; forming in the latter an essential ingredient of the noted vineyards of the Hermitage, in the wines of which its product is mostly blended with that of the Marsanne. The Roussanne wines of Savoy have a peculiar perfume similar to that of the Hermitage wines; they keep indefinitely, improve greatly with age and acquire remarkable qualities. Near Chambery the wine, when bottled in March, is of a *liqueur* character, but becomes dry after several rackings from the cask—they are classed in the first rank.

The Roussanne is of good vigor, and is usually pruned short, yielding its best product under that treatment. It seems specially adapted to the steep and warm hillsides of the Rhone. The berry is of medium size, nearly globular, rather thick-skinned, at full maturity assuming a golden or even reddish-yellow tint. It is rather firm-fleshed, but juicy and sweet, without special aroma; matures late in the second period.

From Folsom the Roussanne is reported to be a fair bearer and of good vigor. It was gathered, fairly ripe, on September 16th, which places it among the earlier grapes of the second period, being markedly earlier than in its original home.

The grape was received in good condition on September 17th, and was crushed the next day, showing 22.58 per cent of sugar. The yield from 192.06 pounds was 13.79 gallons, or at the rate of 143.06 gallons per ton; pomace, 15.8 per cent. The grape corresponded accurately

to the French description.

Fermentation began early on Sept. 21st, the cellar temperature being at 70 degrees, and reached its maximum of 75.2 degrees on the following morning, remaining at this point about forty-eight hours and falling to the cellar temperature of 68 degrees on Sept. 30th.

The wine was racked from the lees on Oct. 15th, again on Nov. 22d, and lastly on Feb. 27th, 1885.

Record of tasting Nov. 15, '84. (Pohndorff.)—Sample in 10 gallon keg. An excellent type of a mild tasting wine, but not apparently adapted for drinking unblended.

Dec. 7th, Report of Vit. Convention Committee.—No. 193 and U. Nos. 14 Marsanne and U. 15 Roussanne are two excellent types of Hermitage white wines of fine bouquet and mellow frank taste, acids grateful. These varieties are adapted for blending with certain red grapes for red wines, as well as for white wines direct; are to be recommended for adoption in our vineyards.

Feb 9, 1885. (Pohndorff.)—Sample in 10-gal. keg, well developed, and the wine of excellent quality. Two other samples, in bottles, are similar to that in the keg. Sample in a small keg has suffered from the thinness of the staves.

March 11th.—(E. W. H.)—The condition of the wine is clear, the color white or light topaz; the bouquet faint as yet but very agreeable, with full vinous flavor; acid full, somewhat less than the Marsanne.

Marsanne.

The geographical distribution of the Marsanne is very nearly the same as that of the Roussanne, above given. Its wines fall considerably below those of the Roussanne in quality, but as the vine is very vigorous, and at the same time a heavy bearer, even under short pruning, it is in favor with the vintners of the region, and serves, as before remarked, as a blend for the Roussanne, and also, in small proportions, with the red wines from the Sirah and other varieties.

The Marsanne bears large bunches, somewhat straggling; its berries are rather small, with a thin and rather delicate skin, which remains of a greenish-white color where not much exposed to the sun, but assumes a fine

golden hue under good exposure. Flesh soft, juicy, sweet and agreeable, without special aroma. Maturity in the third period.

From Folsom the Marsanne is reported to be of good vigor and a fair bearer. The grapes were gathered, fairly ripe, on September 16th, being far ahead in maturity of the time assigned to the variety in France. The grapes were received September 17th and worked on the 18th, showing 21.2 per cent of sugar; 93.12 pounds of grapes yielded 6.85 gallons of must, corresponding to 141.6 gallons per ton; percentage of pomace, 25.11.

Fermentation began in the night of September 20th, and reached the maximum of 82.4 on the morning of September 23d, then gradually fell to the cellar temperature on October 2d; showing a violent fermentation markedly different from that of the Roussanne, in which the maximum of temperature was 7 degrees lower, but lasted much longer. This difference is the more remarkable as the quantity of grapes was in the Marsanne only half of that used in the case of the Roussanne; and this case illustrates forcibly the need of knowing and taking into account the peculiarities of each grape in the fermentation of its must. It is evident that Roussanne must might be safely fermented in much larger packages than that of the Marsanne, without endangering the life of its yeast germs by too great a rise of temperature. In French practice both are usually fermented together, so that their peculiarities are balanced in their joint fermentation.

The wine was racked from its lees on Oct. 28th, having been much slower in clearing than the Roussanne. It was again racked on Nov. 22d, and lastly on February 18th.

Record of tasting.—There is no record of the first tasting, in November, the condition of the wine being then hardly clear enough for a proper judgment.

For Report of Committee of Vit. Convention see above, under Roussanne.

Feb. 11, 1885. (Pohndorff.)—Marsanne in bottles since last racking has had a very satisfactory, even rapid, development; the wine is clear, and its quality very good. The same in kegs has suffered somewhat from the effect of the thin staves.

March 11, 1885.—(E. W. H.)—The condition of the wine is not quite clear; the bouquet has developed decidedly, and the flavor is vinous and agreeable, the acid is adequate, and the wine as a whole is agreeable, though not equal in quality to that of the Roussanne.

The subjoined analyses refer to the wines as last tasted, having been made in March, 1885:

MUST.

No.	Variety.	Date of Receiving Grapes...	Solid Contents by Spindle....	Acid as Tartaric.
29	Clairette blanche....	Sept. 25	21.34	.453
15	Roussanne.....	Sept. 18	22.60	.420
14	Marsanne.....	Sept. 18	21.38	.423

WINE.

No.	Variety.	Body.....	Alcohol by Weight.....	Alcohol by Volume.....	Acid as Tartaric.
29	Clairette blanche	1.850	10.540	12.000	.498
15	Roussanne.....	1.356	10.540	13.000	.468
14	Marsanne.....	1.880	9.200	11.460	.563

It will be noted above that at the same date the Roussanne had about one and a quarter per cent more sugar than the Marsanne, and exceeded to the same extent the Clairette, gathered a week later. The latter, however, slightly exceeds the others in the acid of the must.

In the transformation into wine, the Clairette has lost some acid, while both the others have increased it somewhat, the Marsanne most, yet not to excess. In body the Roussanne appears singularly low, while both the others show about the usual body of dry white wines of the more southern class. In alcoholic strength the Marsanne falls singularly below the other two, notwithstanding that by the spindle indication its sugar was the same as that of the Clairette. Similar discrepancies have been heretofore noted, and may be connected with the peculiarly violent fermentation of the Marsanne.

Of the three wines, the Clairette is at this time unquestionably the farthest advanced toward acceptableness; and this rapid development will largely balance its low yield of must in the profits to be derived from its culture.

Berkeley, May 5, 1885. E. W. HILGARD.